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(54) **BORON-MODIFIED SILAZANES FOR SYNTHESIS OF SIBNC CERAMICS**

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(58) **Field of Classification Search**

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501/94, 95.2, 96.1, 96.4, 97.1; 556/402

See application file for complete search history.

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(56)

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## ABSTRACT

New methods for synthesizing boron-modified silazanes, their use as polymer-derived ceramic precursors, and polymer-derived ceramics and composites formed therefrom are disclosed. The polymeric ceramic precursors comprise a boron-modified silazane that is a room temperature liquid-phase polymer comprising a backbone having recurring monomeric repeat units comprising boron-nitrogen bonds. Nanocomposites comprising polymer-derived ceramics and carbon nanotubes are also disclosed.

**24 Claims, 35 Drawing Sheets**

